

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending July 29, 2011

W76 Anomalies: Last weekend, technicians were removing the detonator cable assembly (DCA) from a W76 unit when they heard a sound and observed some damage to the DCA. They immediately stopped operations and contacted their supervisor, who in turn notified the appropriate Los Alamos National Laboratory (LANL) and nuclear explosive safety (NES) subject matter experts (SMEs). All parties agreed that the configuration was safe and stable and no further immediate safety-related actions were required.

Additional LANL SMEs arrived onsite this week to evaluate the configuration and work with B&W to establish a recovery plan. LANL has agreed to develop a set of criteria—essentially a set of hazard parameters that define a safe operating envelope—that B&W can use to draft a recovery procedure. LANL is scheduled to provide these criteria to B&W next week.

This is the second damaged DCA on the W76 program in the last month and the third damaged DCA total (the other was on the W78 program) in the last seven months (see 7/1/11 and 7/22/11 reports). The responsible process engineers for these programs do not believe there is a common cause for the W78 and W76 events, but believe that both W76 events may have been caused by a relatively new DCA removal tool. The W76 process engineer has already initiated a procedure change to eliminate this tool from the process. It should be noted that the tool had been implemented to better preserve the DCA for surveillance purposes, but it is not necessary to complete DCA removal. Tooling personnel have also designed a new vacuum DCA removal tool that would allow the technicians to remove the DCA in a more controlled manner. The tool is currently being fabricated and will require NES and authorization basis approvals before it can be used.

As part of the recovery effort for the first of the recent damaged DCA events on the W76 program, NNSA held a NES change evaluation (NCE) this week to assess the proposed process changes needed to authorize disassembly of the unit (see 7/1/11 and 7/22/11 reports). The NCE group concluded that the proposed changes satisfy the NES standards and identified no findings. Once the PXS manager approves the NCE, B&W will be able to proceed with the recovery operation, which is currently expected to occur early next week.

Special Tooling: Technicians suspended a B61 disassembly operation this week after they were unable to install a vacuum plate. The technicians contacted their first line supervisor, who determined that a gage on the vacuum plate was interfering with the installation of the tool. The responsible tooling engineer later confirmed that the tool was fabricated within design specifications. He has not reached a final conclusion on the cause of the tooling issue, but currently speculates that the interference was created by a slight unevenness in the stack-up of the other tooling supporting the configuration in question. Now recognizing the relatively tight tolerances involved with the installation of the vacuum plate, the B61 process engineer is considering a procedure change that would require the technicians to use a level when installing the other tools supporting this configuration.